EPA

Notes From Underground

An update on source water protection and underground pollution control from the U.S. Environmental Protection Agency (EPA) Pacific Southwest/Region 9, serving Arizona, California, Hawaii, Nevada, Native American Tribes in the Region, and the Pacific Islands.

Spring 2005
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EPA REGION 9 WEB SITE UPDATE

EPA has launched a new Underground Injection Control Web site for the Pacific Southwest.

Go to www.epa.gov/region09/water/groundwater/uic.html for a tour of the new site.

EPA's Ground Water Office is in the process of updating the site's Source Water Protection information and expects this information to go live in Spring 2005.

Availability of Funds

Workshop on March 24, 2005 to discuss the availability of funds to California Regulators to Map Injection Wells. For more information, go to page 3.

30th Anniversary of the Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), passed by Congress in 1974, marked its 30th anniversary on December 16, 2004. The SDWA is the main federal law that protects public health by regulating the nation's public drinking water supply. Under the SDWA, EPA sets standards for drinking water quality and works with water agencies and regulators at all levels of government to implement those standards.

Underground Injection Control

One of the original provisions of the SDWA is a regulatory program to protect underground sources of drinking water from injection well fluids. The Underground Injection Control (UIC) Program regulates injection activities so that underground sources of drinking water, which supply 90% of all public water systems, are protected. Today, the UIC program regulates more than 800,000 injection wells. To find out more about the UIC Program, go to www.epa.gov/safewater/uic.

In the Pacific Southwest, state UIC Programs are fully delegated to Nevada, Guam, and the Commonwealth of Northern Mariana Islands. Partial delegation has been granted to California Division of Oil, Gas and Geothermal Resources for Class II wells, and for geothermal injection in the state. In non-delegated state and tribal areas, including Hawaii, Arizona, California (for Classes I, III and V wells), the Navajo Nation, and more than 145 other federally recognized tribes, EPA directly implements the UIC Programs with support from state and tribal water quality agencies.

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Large Capacity Cesspool Ban

Existing large capacity cesspools (LCCs) must be replaced by an alternative wastewater system and closed by April 5, 2005, as a result of UIC regulations promulgated on December 7, 1999. The regulations also prohibited the construction of new LCCs nationwide, as of April 5, 2000.

A cesspool is typically a "drywell" which sometimes has an open bottom and/or perforated sides, and receives untreated sanitary waste. The EPA considers a cesspool large capacity when used by:

- A multiple dwelling, community or regional system for the injection of waste (e.g., apartment building), or
- Any non-residential cesspool that is used solely for the disposal of sanitary waste and has the capacity to serve 20 or more people per day (e.g., a rest stop or church).

For more information, go to www.epa.gov/safewater/uic/cl5oper/cesspools.html.

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Source Water Protection

The SDWA was amended in 1986 and 1996 with additional requirements to protect drinking water and its sources - rivers, lakes, reservoirs, springs, and ground water wells. These amendments included promulgation of the Wellhead Protection Program (WHPP -- see SDWA Section 1429) and Source Water Assessment Program (SWAP -- see SDWA Section 1453). WHPP is a pollution prevention program used to protect underground sources of drinking water. Under SWAP, each State was required to assess the susceptibility of all sources of drinking water for public water systems and help inform public the about steps local communities can take to protect their drinking water.

Through these programs and other water quality programs, EPA is taking a multi-barrier approach to protecting sources of drinking water from source to tap.

For more information about the SDWA and to access the 30th Anniversary outreach and education documents, go to www.epa.gov/safewater/sdwa/index.html.

Water Facts & Figures

A person can live more than a month without food, but only about a week, depending on conditions, without water.

65% of the human body is water, 75% of the human brain is water.

75% of a chicken, 80% of a pineapple, and 95% of a tomato is water.

The first water pipes in the US were made of hollowed-out logs.

352 days - record of consecutive days with no measurable precipitation in Sentinel, AZ (February 1901-January 1902).

The world's rainiest place is Mt. Wai'ale'ale, Kauai, Hawaii. During an average year, there are only 15 dry days.

Landscaping accounts for about half the water Californians use at home.

The water in Lake Tahoe could cover a flat area the size of California 14 inches deep. This amount of water is enough to supply everyone in the US with 50 gallons of water/day for 5 years.

Nevada is the driest state in the nation with an average annual rainfall of only about 7 inches.

Sources: USEPA; AZDEQ; www.brita.com; www.ccwd.org/pages/gen_info/water_facts.htm; tahoe.usgs.gov/facts.html; http://www2.thingstodo.com/states/NV/facts.htm

State Source Water Assessment Programs COMPLETED

All Pacific Southwest states (AZ, CA, HI and NV) have completed their Source Water Assessment Program (SWAP) per Section 1453 of the 1996 Amendments to the Safe Drinking Water Act.

Top Potential Contaminating Activities (PCAs) identified in state assessments include:

AZ:
- Leaking Underground Storage Tanks (UST/LUST)
- Agriculture
- Wastewater Treatment Plants/Septic Systems
- Superfund Sites
- Golf Courses

CA:
- Septic Systems
- Sewer Collection Systems
- Surface Water Recreation
- Gas stations & Automotive Facilities

HI:
- Agriculture
- Cesspools
- Septic Systems

NV:
- Septics Systems
- Gas Stations
- Auto repair shops
- Above ground storage tanks

To obtain information about the results of the assessments and to learn more about how you can help protect your drinking water source(s), please contact:

AZ: Donna Lucchese, SWP Manager (Acting)
Arizona Department of Environmental Quality
(602) 771-4641, Lucchese.Donna@azdeq.gov
www.azdeq.gov/environ/water/dw/swap.html

CA: Leah Walker
California Department of Health Services
(707) 576-2295, LWalker2@dhs.ca.gov
www.dhs.ca.gov/ps/ddwem/dwsap/DWSAPindex.htm

HI: Dan Chang, SWAP/SWP Coordinator
Hawaii Department of Health
(808) 586-4258, dchang@eha.health.state.hi.us
www.hawaii.gov/health/environmental/water/sdwb/swap/swap.htmlsdwb/swap/swap.html

NV: Russ Land, Ground Water Branch Supervisor
Nevada Division of Environmental Protection
Bureau of Water Pollution Control
(775) 687-9428, rland@ndep.state.nv.us
ndep.nv.gov/bwpc/wellhead.htm

Tribal Corner

Onsite Wastewater Treatment System (OWTS) Management

Based on EPA's Voluntary National Guidelines for Management of Onsite and Clustered Wastewater Treatment Systems, EPA Region 9 developed a guidance document, *Tribal Management of Onsite Wastewater Treatment Systems*, that provides tribes with the necessary steps to protect groundwater resources and public health against contamination from onsite wastewater systems (e.g., septic systems). Below is a summary of the steps. The complete document can be found at www.epa.gov/region09/water/groundwater/tribal-waste-water04.pdf.

Step 1: Locate and Map the System
Locate and map all OWTS and keep in a permanent file. Hyrdrogeologic conditions should also be collected.

Step 2: Design Review
Environmental/ Utility Programs should be responsible for the approval of new OWTS prior to construction. Design should account for soil characteristics, ground water elevation and flow direction, expected wastewater flow, septic tank volume, absorption area and type of drainfield.

Step 3: Maintain
Establish an operation and maintenance schedule for each OWTS. This schedule should include regular monitoring of the sludge and scum layers in all chambers and the condition of the drainfield. Tanks should be pumped accordingly. **All maintenance activities performed on OWTS should be kept on record.**

Step 4: Regulate
Develop and incorporate the OWTS Management Guidelines into ordinances.

For more information on OWTS, go to http://cfpub.epa.gov/owm/septic/home.cfm.

Technical information about OWTS options is available free or at low cost from the **National Small Flows Clearinghouse,** (800) 624-8301 www.nsfc.wvu.edu.

TRIBAL WASTEWATER EVALUATIONS are available for tribes within EPA's Pacific Southwest Region. For information call EPA at (415) 972-3544, (415) 972-3531 or the Rural Community Assistance Corporation at (760) 492- 2543.

EPA MAKES FUNDS AVAILABLE TO CALIFORNIA REGULATORS TO MAP INJECTION WELLS

Contamination of California's ground water has resulted in lost drinking water sources in many communities, as well as billions of dollars in costs for ground water remediation. Some of this contamination could have been prevented if endangering wastewater disposal practices were identified and controlled.

To protect ground water, the Safe Drinking Water Act's Underground Injection Control (UIC) program authorizes the EPA to regulate underground injection wells. The largest group of injection wells are called Class V. These include any that infiltrates and permanently emplaces fluids into or above drinking water aquifers.

EPA is offering contracts to local agencies in California that have data to share or are authorized to collect it, to help in the Agency's efforts to inventory Class V shallow injection wells.

Any California city or county regulatory agency with the authority to inspect commercial land uses, for the purposes of hazardous materials management or onsite sewage disposal is eligible to apply.

EPA will host a workshop for prospective applicants, including interested regulators, on March 24, 2005. If you have any questions, would like a copy of the proposal guidance, or to reserve a space in the workshop, please contact Elizabeth Janes at janes.elizabeth@epa.gov or (415) 972-3537. Proposals for this contract opportunity are being accepted now through April 15, 2005.

Safe Drinking Water Act Hotline
1 800-426-4791

The Safe Drinking Water Act (SDWA) Hotline provides information about drinking water and ground water programs authorized under the SDWA. Hotline topics include :

- Drinking water standards/quality
- Injection wells
- Public drinking water systems
- Septic systems
- Source water protection

Water Lines is a monthly Hotline activity report that includes typical questions, call/e-mail statistics, caller profiles, and other water facts.

For more information about the Hotline and to read current and previous issues of *Water Lines* online, go to www.epa.gov/safewater/hotline.

Recent Announcements

EPA Joins With Partners to Reduce Water Pollution

EPA and eight national partner organizations recently signed an agreement to address environmental problems resulting from failures of decentralized wastewater treatment systems (often called septic systems) when they occur. The agreement formalizes the collaboration between EPA and its partners to help local governments improve their wastewater programs. The agreement focuses on better planning, septic system design, and long-term operation and maintenance of septic systems.

A program strategy accompanied the agreement and identifies EPA's actions to improve the performance of septic systems. The agreement and strategy are intended to upgrade the management of these systems and facilitate collaboration between EPA, state and local governments, and national organizations representing practitioners and assistance providers. Improved performance of decentralized systems will provide better protection of public health and water resources.

For more information about this effort or the decentralized wastewater treatment system program, go to epa.gov/owm/septic.

Upcoming Events

March 16 - 17, 2005: Ground Water Association of California, Artificial Recharge Workshop in Sacramento. Go to www.grac.org for more information.

March 24, 2005: EPA Region 9, Workshop on Available Funds to California Regulators to Map Injection Wells in San Francisco, California. For more information, contact Elizabeth Janes at janes.elizabeth@epa.gov.

May 5, 2005: Drinking Water Protection Forum, EPA Region 9, NV Tahoe Water Supplier Association, and Tahoe Regional Planning Agency hosts in Lake Tahoe. Contact Kate Rao at rao.kate@epa.gov for more information.

July 2005: Tribal Source Water Assessment Training. For more information, contact Eric Byous at byous.eric@epa.gov.

September 24 - 28, 2005: Ground Water Protection Council Annual Meeting in Portland, Oregon. Go to www.gwpc.org for more information.

Ongoing: UC Davis Ground Water Web Page. Lists ground water events in California and surrounding states. Go to groundwater.ucdavis.edu/gwcalendar.htm.

Notes From Underground

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